a user control for instructing the digital control unit to perform initialization of the memory element.

22. (NEW) A process for using a removable memory element in a digital camera comprising:

checking the memory element to determine whether it has been initialized,

providing an indication to a user of the camera of results of the checking, and

initializing the memory element in response to a user command.

23. (NEW) A digital camera comprising:

an operator-selectable control switch,

means for capturing and digitizing image data,

a memory element for storing digitized image data, and

a programmable control unit including:

means for initiating and performing a self-test diagnostic routine upon power-up of the camera; the routine including

checking status information concerning the operator-selectable switch,

checking for presence of the memory element,

checking for initialization of the memory element,

checking a capacity of the memory element, and

determining an available number of image frames storable on the memory element based upon the switch status information and the memory capacity checking.

24. (NEW) The digital camera of claim 23 further comprising:

means for displaying the available number of image frames storable on the memory element.

25. (NEW) The digital camera of claim 23 wherein the memory element is removably coupled to the camera and wherein the programmable control unit further comprises means for initiating and performing a self-test diagnostic routine for checking for initialization and capacity of the memory element upon coupling of the memory element to the camera.

26. (NEW) The digital camera of claim 23 wherein the programmable control unit further includes means for periodically repeating the checking of the switch status information during use of the camera.

27. (NEW) The digital camera of claim 23 wherein the operator-selectable control switch is capable of assuming a plurality of settings including:

a color/black and white selection setting,

a resolution mode selection setting, and

a compression mode selection setting.

28. (NEW) In a digital camera having an operator-selectable control switch, an electric power supply, means for capturing and digitizing image data, a memory element removably coupled to the camera and a programmable control unit, a method for performing, via the control unit, diagnostic tests on the camera comprising the steps of:

sensing power-up of the camera,

checking an output level of the power supply,

performing diagnostic tests on the control unit,

checking status information concerning the operator-selectable switch,

checking for the presence of the removable memory element,

checking for initialization of the removable memory element,

checking a capacity of the removable memory element, and

determining an available number of image frames storable on the memory element based upon the switch status information and the memory capacity checking.

29. (NEW) The method of claim 28 wherein the steps are periodically repeated during use of the camera.

30. (NEW) The method of claim 28 wherein the steps of checking for initialization, checking a capacity and determining an available number of image frames are performed whenever a removable memory element is coupled to the camera.

31. (NEW) A digital camera for taking pictures and storing them in an applied storage device in the camera, said apparatus comprising:

an image pick-up unit for generating and outputting a digital image signal photoelectrically converted from an image incident thereon,

a digital control unit for formatting said digital image signal in a format dependent upon the type of said applied storage device,

an initialization control switch on said digital camera for commencing operation for initialization of the applied storage device, and

an erase mode control switch for selectively erasing and recording over digital image data stored on said applied storage device.

32. (NEW) An electronic camera comprising:

an image capture unit for generating a digital data representation of a captured light image;

a storage device for storing said digital data representation as a frame of image data in the form of an image data file having a variable length, said storage device having stored therein data regarding unused storage capacity of the storage device;

a storage device input/output interface for recording said image data file in said storage device and for reading said data regarding said unused storage capacity;

a mode selection switch having settings which change the length of an image data file to be recorded in said storage device depending on the mode selected;

a digital control unit for examining the unused storage capacity data and the mode selection switch setting to determine the remaining number of frames of image data that can be stored in the unused storage capacity of the storage device based on the variable length of the image data files for said remaining frames as determined by the mode selection switch setting, such examination occurring periodically after the recording of an image data file in the storage device; and

a user display for displaying an error code whenever said periodic examination of the digital control unit determines that said remaining area of the storage device is insufficient for recording an image data file of the variable length determined by the mode selection switch setting.

33. (NEW) The camera of claim 32 wherein said user display additionally displays a number of available image storage frames available at a current mode switch setting.